CW#43: Circles in the Coordinate Plane

Geometry

Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ TP:\_\_\_\_\_

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| You will be able to find the area or circumference of a circle in the coordinate plane given the coordinates of the center of the circle and another point on the circle. | |
| Criteria for Success: Did you…   * Plot your points correctly * Identify the radius or diameter * Choose the correct formula * Input the value for the correct unknown * Solve for area or circumference * Examine your answer: Does it answer the question? Does it make sense? Include units? | |
| 1. ../Images/Coordinate_Grid_XYAxis.PNGA circle is centered at O(2,2) and the point P(2,0) lies on the circle.   a) Plot points O and P on the grid below, then sketch in the rest of the circle.   b) Identify and label the radius of the circle. How long is the radius? How do you know?       c) Find the area of the circle. | Directions: Complete the problems below in your notebook. Round your answer to the nearest hundredth.   1. A circle is centered at O(5,3) and the point P(2,5) lies on the circle. Find the area of the circle. 2. A circle is centered at O(-4,-4) and the point P(-1,-6) lies on the circle. Find the area of the circle. 3. A circle is centered at O(-3,-4) and the point P(-1,-5) lies on the circle. Find the circumference of the circle. 4. A circle is centered at O(0,0) and the point P(-3,4) lies on the circle. Find the circumference of the circle. |

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| You will be able to find the area or circumference of a circle in the coordinate plane given the end points for the diameter. | |
| Criteria for Success: Did you…   * Plot your points correctly * Use Pythagorean Theorem to find the distance between two points. * Choose the correct formula * Input the value for the correct unknown * Solve for area or circumference * Examine your answer: Does it answer the question? Does it make sense? Include units? | |
| 1. ../Images/Coordinate_Grid_XYAxis.PNGThe endpoints of a diameter of a circle are A(-10,5) and B(4,5). Find the circumference.   a) Plot points A and B on the grid below, then sketch the rest of the circle.   b) Find the length of the diameter.       c) find the circumference of the circle. | Directions: Complete the problems below in your notebook. Round your answer to the nearest hundredth.   1. The endpoints of a diameter of a circle are (0,0) and (7,7). Find the circumference of the circle. 2. The endpoints of a diameter of a circle are (-2,0) and (-5,6). Find the circumference of the circle. 3. The endpoints of a diameter of a circle are (2,3) and (-1,5). Find the area of the circle. 4. The end points of a diameter of a circle are (-2,1) and (4,7). Find the area of the circle. |